Reducing Your Waste

Tips That Are Good For Business And The Environment

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- Money saving tips
- Waste management tips
- Green business tips
- Compliance tips

Cardboard can represent a large portion of the waste stream and can be a revenue generator

Cardboard is often used to deliver materials and products such as plumbing fixtures, appliances, tiles and other materials. Some of it can be reused to cover and protect floors during painting and finishing, and all of it can be recycled. Dedicate a bin on-site to ensure you keep its value for recyclers.

Break down boxes and packaging before shipping out a bin

A load of empty boxes, intact pallets and reels, empty drums or jumbled waste is an inefficient and expensive use of bin space. When you are paying for every pickup, you don't want bins to be trucked away filled with empty air pockets, especially when many of these items can be returned, reused or recycled. Separate 'like' items on-site, reduce their size, compact them if you can and send them to their appropriate recycling end markets.

Clean plastic scrap can be worth cash to a recycler

For large jobs that generate substantial amounts of plastics it is worth separating the materials on-site. Materials such as vinyl siding, PVC piping and poly sheeting all have recycling markets if handled properly on-site.

Use extra concrete, broken masonry and bricks as fill

Concrete materials can be used under garages, future driveways and parking lots. If there is any brick left over that can't be reused as clean fill, order a 'brick only' bin and ship it out for recycling elsewhere.

Drywall scraps can be gathered and shipped to a recycler

In bidding for a contract, it is in the drywallers best interest to keep material costs as low as possible by reusing large off-cuts where possible. Minimizing drywall wastes will reduce disposal costs for the project. Project managers should pay close attention to drywall contracts to ensure only necessary materials are costed and that subcontractors agree to manage their own off-cuts by sending it to a recycler.

Panelizing can reduce waste dramatically

When walls, trusses and floors are fabricated in a centralized plant, shipped out to the building site, erected by crane and hammered into place, very little wood waste is generated on-site. Panelizing means lumber can be ordered to size which eliminates cutting and stick framing on-site.

Steel materials can generate revenue and offset disposal costs

Most steel beams are ordered to size and fit perfectly to project specifications, eliminating the need to do any cutting on-site. Any steel off-cuts that do occur can be co-mingled with other steel such as strapping and sold to scrap dealers or steel mills.

Require carpenters to pile all wood scraps and off-cuts in a designated spot for reuse to reduce waste and costs

Useful wood pieces can be redistributed where they are needed with the remainder going into a designated 'lumber only' bin. Scrap lumber can be reused for bracing while framing a new house. Carpenters' off-cuts can be saved and used for blocking or spacers, or by the concrete and drain contractor to make slip frames while pouring porches, front steps and door sills.

Up to 15 per cent of the material going into a waste bin is new and unused construction material

These may be overages or material damaged while stored on site. Procurement policies should direct that supplies don't arrive on site too soon (where there is limited, protected storage space). You might consider under-ordering and topping up supplies as they run low, or requiring your suppliers to take back unused materials.

Standardizing design specs will help minimize waste

If all rooms are primed the same colour and painted a uniform 'builders' beige', and if all the trim is white, there is little wasted paint. If paint is left over, the contract should require that all surplus paints and wastes be removed from the site by the subcontractor and handled responsibly. Dumping paint, stains, solvents or any other toxic liquid in drains or open pits pollute land and water and is against the law.

Reusing material on-site can be beneficial

Many of the containers used to deliver supplies and materials can be reused on-site. Workers can use empty pails to haul around their tools, while larger barrels can be used to collect scraps and waste.

Capture waste materials routinely dumped at construction sites

Vinyl siding and asphalt shingles, carpeting and underpadding, insulation, extra or broken tiles and bricks, paints and solvents, even the aluminum cans and plastic bottles that the crew bring for lunch end up in the mixed waste bins. Ask your waste service provider to help identify recyclable materials in your waste streams and make it easier for workers to recycle what they bring on-site.

The waste materials manager has to be a strong organizer

It is important to include a work-flow chart in your diversion work plan to know when each of the trades is scheduled to arrive on-site, which materials they will be using and how much waste they are expected to generate. Then you must coordinate with the waste/recycling hauler to determine where the separated material bins should be located, and when they are to be rotated out and replaced.

Plan it out

The project's site map should clearly demonstrate on-site management practices, including: the location of waste/recycling storage and sorting areas (if available), the entrance and exit routes for waste haulers and recyclers for delivery and off-loading, as well as laydown and compound storage areas.

Collection logistics are critical to successful source separation

In all projects, subcontractor services are timed specifically. For example, you may need different bins for concrete, wood and steel, as well as another for mixed wastes. You won't need a dedicated bin for gypsum until the drywallers make their first appearance. And as the plumbers, electricians, tilers and other trades move through, you may require a separate bin for all of the cardboard packaging that will start to accumulate. Separating 'like' materials at source will minimize disposal costs and maximize recycling options.

Small is beautiful

If space is too tight for multiple 40-yard 'roll-off' bins, request your hauler supply smaller 'front-end' bins which are available in sizes ranging from two to eight cubic yards. Even on sites where space is not a premium, front-end bins could be reserved for lower volume recyclable waste streams. Another option in situations where source separation is limited by space is to arrange for a waste hauling company to collect, and later sort, mixed CRD wastes, though typically this costs more.

Even 'non construction' mixed wastes can be recycled if considered and collected

Many CRD project sites generate 'non construction wastes' including beverage cans, water bottles, office paper, cardboard and some plastics. If collected separately they can be further sorted and transported by the waste/recycling service provider to a recycling facility.

Make recycling convenient

Place smaller bins or empty drums, labeled 'Recyclable Waste' and 'Non-Recyclable Waste' in convenient locations where your workers and trades people are working. These can be emptied into the collection bins at the end of the day, or as they fill up.

Reusing quality used and surplus building materials makes sense

Contractors can drop off materials or arrange for them to be picked up by many reuse centres. For larger renovations, full or partial demolition jobs, maximum reuse can be achieved by arranging for a reuse centre to deploy their crew and remove all salvageable materials prior to site deconstruction.

A successful tender should include waste reduction commitments

The initial orientation meeting with each new set of subcontractors and their workers should cover the fundamentals and specifics of the waste diversion plan. Clearly state your waste reduction goals and be clear about the incentives you are offering, and/or the penalties that can follow non-compliance. Ensure all contractors understand your expectations for waste reduction.

Waste/recycling service providers can do more than haul away materials

An experienced waste service company should be able to provide realistic estimates of the waste generation rates for each of the major material streams. Look for a service company that can help with the paperwork. They may even offer checklists or software that can aid in completing the audit and waste plan report to the ministry.

Ask for regular and complete waste management reports

Your service provider should report on the recyclable and non-recyclable materials trucked away, including the weight and final disposition of each bin. This type of tracking will ensure that material is managed efficiently in order to maximize collection and minimize transport.

Prevent cross-contamination in your collection bins

Recycling bins should be dropped inside secure or fenced areas. Erect clear signage to explain your waste management policies and direct wastes to the proper bins or sorting areas. Site security should routinely check to ensure bins are not being used for unauthorized purposes.

Vigilance is the key to recycling success

Regularly inspect the work site every day to ensure wastes and recyclables are cleaned up and taken to the proper storage piles or collection bins. Use a digital camera to document unsatisfactory conditions and e-mail a noncompliance memo to the offending subcontractors. If the situation doesn't improve within 24 hours, send in your cleaning staff to do it themselves, with the extra costs charged back.

Planning is key

The first job of the waste materials manager is to look at the designs and specifications of the project. Lists and quantities of building materials expected on the site should provide the basis for your initial waste generation estimates. The manager should meet with all site staff and contractors to review the waste reduction work plan, and to ensure that everyone's roles and responsibilities are clearly understood.

Select a waste materials manager

One person, either an employee or an outside consultant, should coordinate the waste audit and draft the waste reduction work plan. The same person should then track and divert valuable materials out of the waste stream, work with contractors and subcontractors to ensure the specifics of the plan are met, complete the necessary paperwork and provide ongoing feedback. Putting in time to manage materials properly in the first place will reduce disposal costs in the end.

Consider site conditions and neighbours when developing your recycling plans

Residents living nearby may mean that materials, like concrete, can't be processed on-site due to noise and dust concerns. Space on-site may also be limited. Some possible solutions include using smaller bins and more frequent pickups, and contracting with waste/recycling service providers to sort materials off-site. The use of split-bins and split-chutes can also help maximize the available space. Good planning will ensure that materials with recycling value can be salvaged, stored and transported for remanufacturing.

Consider allowing subcontractors the option of diverting their own wastes

Site managers can opt to have subcontractors divert their own materials such as drywall wastes, scrap steel, even fireproofing materials. However, contracts should require that each subcontractor document the amounts of waste sent off-site and verify their final destination. Sharing responsibility for diversion can make everyone more waste conscious and more effective at overall waste reduction.

Make contractors responsible for their own supplies

Project managers can support their diversion plans and activities by requiring the support of their subcontractors. For example, most concrete trades supply their own wooden slip forms, and work hard to get the maximum possible use out of them. They'll employ a couple of workers just to hammer the nails out of the used forms, bundle them together and load them on a truck for the next job. Forms only go into the wood waste bin if they cannot be reused. This approach prolongs the useful life of the material and reduces the need to replace the forms every time.

Consider how supplies and products are shipped to the project site

While suppliers are usually quite diligent about retrieving their expensive shipping containers, it can sometimes take a couple of phone calls to get a supplier to pick up wooden pallets or empty reels. Pallets that have been abandoned or are too battered to be reused can be broken down and put into the wood waste bin. Some suppliers have switched to reusable metal racks or bins to ship their materials. Ask your suppliers what options are available for your project.

Use suppliers that offer recyclable packaging and reverse distribution delivery systems

Set aside a staging area on-site for collecting, storing, and processing the pallets, bins and other packaging that needs to be returned to the vendor. This reduces the amount of packing and delivery waste, and saves valuable handling time by not having to unbox individual items. The parts are also readily visible and easier to locate and inventory.

Be creative

Taking time to consider what materials may be salvaged from a CRD project site will be worth it. For example, one contractor demolished an old police station and reused the bulletproof glass to make fish tanks. Another renovation contractor was able to recycle all the fluorescent light bulbs by giving them to local businesses.

Better buying habits

Buying in bulk (by the bin or pallet) can reduce the amount of packaging waste. Materials such as fasteners, paint, caulking and drywall mud can be purchased in bulk containers (which also protect the contents from weather damage). This reduces excess and unnecessary packaging materials.

Make it beneficial for all involved

Instead of paying on a piecework basis, a 'supply and install' contract could make everyone more waste conscious. If a contractor supplies his own materials, he has greater economic incentive to reduce wastes. Consider offering a bonus for reducing wastes and paying performance bonds for contractors who contribute to the project's waste reduction goals.

Put it in writing

The only way to guarantee that your subcontractors and trades will meet the requirements of your waste diversion plan is to detail them in the contract, including penalty provisions if designated materials don't get properly sorted and delivered to the right bins.

Add a specific 'green procurement' section to all of your tenders and contracts

Contracts with trades and subcontractors may have to be reviewed to ensure they include waste reduction or environmental performance clauses. See the *Diversion Requirements and Waste Management Specifications – Say it right* fact sheet which explains how to insert appropriate language into your contracts.

Keep everybody involved in your waste reduction work plan

Progress reports and any problems that arise can be covered in the weekly foreperson's meeting. There may also be an opportunity to address waste reduction requirements at the regular 'tailgate' or 'toolbox' meetings held to cover health and safety topics. You should also post regular program updates, including the totals of diverted waste, any special problems or challenges and the time for the next meeting.

Get ideas from everyone involved: employees, trades, suppliers and service providers

Provide a positive environment and don't reject any suggestions out of hand. Offer a reward – a new drill, a toolbox, a suitable gift certificate – for the best waste reduction/reuse or recycling idea of the week. A bonus could also be offered based on avoided waste disposal charges or for exceeding targets.

Your waste/recycling service providers are an integral part of the waste diversion team

They need to be involved in all phases of a project, from the planning and on-site management through to the final clean-up phases. The implementation of your waste reduction program should be incorporated into their contractual obligations. You might even offer a bonus for meeting or exceeding targeted diversion rates.

A good waste/recycling service provider can keep your diversion plan 'on track'

Ask for regular feedback on unacceptable cross-contamination in any of the material bins. In turn, the project foreperson will remind the trades about the proper waste separation procedures, and inform them that if the problem persists there will be a charge-back for any extra sorting costs incurred.

Avoiding cross-contamination in your recycling bins from local residents

Many builders find that local residents dump their garbage into on-site recycling bins. That's because garbage collection in new housing developments may not begin until a certain percentage of the units are occupied. Be proactive. Set aside a bin for local garbage and another for recyclables. It could improve relations … and keep cross-contamination problems in check.

Make sure the wastes transported off-site are going where you expect them to

It's your responsibility to track your wastes and ensure that recyclable materials aren't ending up in landfill. That means obtaining a copy of the ticket or bill of lading for every bin that leaves the job site. Waste diversion should be spelled out in the contract and verified on paper. Compliance with the 3Rs Regulations is your legal responsibility – not that of your waste/recycling service providers.

A waste reduction work plan doesn't belong on the shelf

The entire project team should be familiar with the work plan and its diversion goals. The manager should review it on a regular basis during the course of the project to make sure it reflects changing conditions and accommodates any problem materials or recycling opportunities that may arise. For multi-year projects the plan must be formally updated every year. Good planning early on in the project will save time and money.

Each project's waste reduction work plan is unique

What works on one site, won't necessarily work on another. Available markets for materials will not be the same in all regions of Ontario. Despite the regional disparities, you must still comply with Ontario's waste diversion regulations, ensuring that the details of your reduction work plan meet the mandatory requirements.

Visit RCO's e-directory for market related information
www.rco.on.ca/e-directory

Make regulatory compliance a priority

At an absolute bare minimum, your tender document should stipulate that all trades and services understand and adhere to the requirements of Ontario Regulations 102/94 and 103/94 – the two 3Rs Regulations that apply specifically to the construction and demolition sectors.

Share the waste reduction work plan – regularly

Post a copy of the waste reduction work plan on the site's Health and Safety Bulletin Board. Copies should also be distributed to all trade contractors and suppliers (during the orientation meeting) and reviewed with all workers, waste haulers, recyclers and the Joint Health/Safety and Environment Committee.

Get what you pay for – visit the site regularly

It's important that your recyclable scrap is actually being recycled. Visit your service provider's site and verify how materials are handled, sorted and sold into secondary markets. Ask for proof of final disposition and then take time to confirm that your wastes are actually being diverted.

www.ontario.ca/wastereduction
www.ontario.ca/reductiondesdechets

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